



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,806	07/20/2004	Detlev Neuland	02/003 LTS	4939
7590 04/03/2006			EXAMINER	
Klaus Schweitzer			MAZUMDAR, SONYA	
ProPat			ART UNIT	
425 C South Sharon Amity Road			PAPER NUMBER	
Charlotte, NC 28212-2841			1734	

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/501,806	NEULAND ET AL.	
	Examiner	Art Unit	
	Sonya Mazumdar	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 July 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/20/2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. It is noted that this application appears to claim subject matter disclosed in prior application no. PCT/EP03/00334, filed January 15, 2003, which claims benefit of 60/351745, filed January 25, 2002. A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). See 37 CFR 1.78(a). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. If the application is a utility or plant application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the specific reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a utility or plant application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the specific reference must be submitted during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of

any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c). A benefit claim filed after the required time period may be accepted if it is accompanied by a grantable petition to accept an unintentionally delayed benefit claim under 35 U.S.C. 119(e), 120, 121 and 365(c). The petition must be accompanied by (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted), (2) a surcharge under 37 CFR 1.17(t), and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

If the reference to the prior application was previously submitted within the time period set forth in 37 CFR 1.78(a), but not in the first sentence(s) of the specification or an application data sheet (ADS) as required by 37 CFR 1.78(a) (e.g., if the reference was submitted in an oath or declaration or the application transmittal letter), and the information concerning the benefit claim was recognized by the Office as shown by its inclusion on the first filing receipt, the petition under 37 CFR 1.78(a) and the surcharge under 37 CFR 1.17(t) are not required. Applicant is still required to submit the reference in compliance with 37 CFR 1.78(a) by filing an amendment to the first sentence(s) of the specification or an ADS. See MPEP § 201.11.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed adhesive strip fixed to the intermediate support material at the starting point in claim 10 and the claimed wound-up regenerated transfer support web in claim 16 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: on page 4, line 28, "embodiment" is spelled incorrectly and should be changed to "embodiment".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 through 16 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for winding a composite of intermediate support layer and coating, does not reasonably provide enablement for an invisible winding station. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims. On page 7, line 3 of the specification, it is disclosed that the product of the intermediate support material and the coating in web form is fed to an invisible winding station. An invisible winding station's structure is incomprehensible and one having ordinary skill in the art would not deem its use feasible.

5. Claim 16 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. To form an endless loop of the transfer support web, it is not clear how the transfer support

Art Unit: 1734

web is wound up for storage. An endless loop is not formed if the transfer support web is taken out and placed in for recirculation at a later time.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claim 2, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

8. Claim 10 recites the limitation "the starting point" in the 2nd line. There is insufficient antecedent basis for this limitation in the claim.

9. Regarding claim 11, the phrase "like" following the word "paper" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "-like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

10. Claim 16 recites the limitation "the regenerated transfer support web" in the 2nd line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
12. Claims 1 through 6, 9, 11, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al. (US 5006189) in view of Parker et al. (US 4473422)

With respect to claim 1, Tsukamoto et al. teach applying coating (202) onto a surface of a transfer sheet (203) on a regeneration station, referred to as an endless belt, then heating the coated sheet with a heating roller (204) (column 3, lines 33-41; Figure 2). A support material, referred to as a substrate (201), is contacted with the coated sheet, where the coated surface faced towards the substrate, and forms a composite web. The transfer sheet on the endless belt is separated from the web, leaving the coating on the substrate and the transfer sheet revolving around the endless belt (column 3, lines 41-46; Figure 2).

Tsukamoto et al. does not teach winding up and storing the product, which is the coated substrate. Parker et al. teach winding up and storing a coated substrate in a roll, after transfer of a coating from a carrier and separation from the carrier (column 10, lines 30-34; Figure 1).

It would have been obvious for Tsukamoto et al. to wind up and store the coated substrate as Parker et al. taught and would have been motivated to do so for later use of the coated substrate product.

With respect to claim 2, Tsukamoto et al. teach coating a transfer sheet made of polyethylene terephthalate (PET) (column 2, line 67 – column 3, line 1; column 4, lines 15-31).

With respect to claim 3, Tsukamoto et al. teach coating a transfer sheet having a uniform thickness over its total length around an endless belt (column 4, line 22; Figure 2).

With respect to claim 4, Tsukamoto et al. does not specifically teach preparing coating by mixing its ingredients in an aqueous medium. Parker et al. teach preparing a lacquer coating by mixing its ingredients in an aqueous medium (column 10, lines 54-65; column 11, lines 12-20).

It would have been obvious for Tsukamoto et al. to prepare coating by mixing its ingredients in an aqueous medium as Parker et al. taught and would have been motivated to do so for ease in preparation of the coating as opposed to working with an already solidified coating.

With respect to claim 5, Tsukamoto et al. teach applying coating to the transfer sheet by a casting method in a thickness of 10 μm (column 4, line 45; Figure 2).

With respect to claim 6, Tsukamoto et al. teach using a heating roller to treat a transfer sheet with coating (column 3, line 37; Figure 2).

With respect to claim 9, Tsukamoto et al. teach placing the transfer sheet (203) with coating thereon (202) to a laminating section where a substrate (201) is applied onto the coating (Figure 2). Tsukamoto et al. does not specifically teach coating a substrate coming from a storage roll. Parker et al. teach coating a paper board substrate coming from a storage roll (21) (Figure 1).

It would have been obvious for Tsukamoto et al. to have a substrate coming from a storage roll as Parker et al. taught and would have been motivated to do so to be economical with money and space with the substrate in roll form as opposed to coming in from a conveyor belt.

With respect to claim 11, Tsukamoto et al. teach applying coating to a substrate made of PET (column 2, line 67 – column 3, line 1; column 4, lines 15-31).

With respect to claim 12, Tsukamoto et al. teach revolving a transfer sheet (203) around an endless belt after separation from a coated substrate (201, 202) (Figure 2).

With respect to claim 15, Tsukamoto et al. teach recirculation of the transfer sheet after separation from a coated substrate around an endless belt to the coating station, to be applied again with coating (Figure 2).

13. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al. in view of Parker et al. as applied to claim 6, and further in view of Instance (US 3869328).

The teachings of claim 6 are as described above.

With respect to claims 7 and 8, Tsukamoto et al. teach heat-treating the transfer sheet with coating with a device set at a temperature of 100°C (column 4, line 21).

Art Unit: 1734

However Tsukamoto et al. in view of Parker et al. do not teach heat-treating the transfer sheet with coating in a hot air chamber. Instance teaches coating labels with adhesive placed on a drum, then drying them in a hot air chamber around the periphery of a drum before being applied to a web (column 1, lines 51-54; column 4, lines 46-48).

It would have been obvious for Tsukamoto et al. in view of Parker et al. to use a hot air chamber for heat treatment of the transfer sheet with coating as Instance taught because a hot air chamber thermally treats the both surfaces of the sheet, whereas the heat roller disclosed by Tsukamoto et al. thermally treats one surface of the sheet.

14. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al. in view of Parker et al. as applied to claim 1, and further in view of Barry (US 5863628).

The teachings of claim 1 are as described above.

Tsukamoto et al. in view of Parker et al. do not teach applying a strip of adhesive on a substrate before contacting a coated transfer sheet. Barry teaches applying separate layers of adhesive (160, 162) by means of an adhesive applicator (164) onto a backing (154) before making contact with labels are placed thereon (column 8, lines 38-43; Figure 10).

It would have been obvious for Tsukamoto et al. in view of Parker et al. to apply a strip of adhesive on a substrate before transfer of a coating or labels as Barry taught. One would have been motivated to strengthen adherence between the substrate and coating.

15. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al. in view of Parker et al. as applied to claim 12, and further in view of Harmon et al. (US 2820716).

The teachings of claim 12 are as described above.

Tsukamoto et al. in view of Parker et al. do not teach using a means for removal of adhering foreign particles from the transfer sheet and vacuum cleaning the transfer support web after separation from a substrate. Harmon et al. teaches using a vacuum duct containing rotating brushes for cleaning excess particles left from a thermoplastic particle distribution drum (column 6, lines 13-16; Figure 3).

It would have been obvious for Tsukamoto et al. in view of Parker et al. to include a means for removal of adhering foreign particles from the transfer sheet and vacuum cleaning the transfer sheet as Harmon et al. taught. Tsukamoto et al. in view of Parker et al. would have been motivated to do so to have a clean and residue-free transfer sheet before being coated again for the following transfer to the substrate.

16. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al. in view of Parker et al. and further in view of Harmon et al. as applied to claim 13, and even further in view of Smith (US 6090238).

The teachings of claim 13 are as described above.

The combined teachings of Tsukamoto et al., Parker et al., and Harmon et al. do not teach decontaminating the transfer sheet after separation from a substrate. Smith teaches removing adhesive coating from a substrate surface, and further removing

adhesive residue by delivering water and an organic solvent to a substrate surface (column 2, lines 1-20; column 4, line 2-17; column 5, lines 44-45).

It would have been obvious for Tsukamoto et al. in view of Parker et al. to decontaminate the transfer sheet after separation from a substrate as Smith taught. Tsukamoto et al. in view of Parker et al. would have been motivated to do so to have a clean and residue-free transfer sheet before being coated again for the following transfer to the substrate.

17. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto et al. in view of Birckhead, Jr. et al. (US 3823209)

With respect to claims 17 and 18, Tsukamoto et al. teach a coating station (202) over the surface of a transfer sheet (203) on a regeneration station, referred to as an endless belt, then heating the coated sheet with a heating roller (204) (column 3, lines 33-41; Figure 2). A support material, referred to as a substrate (201), is laminated with the coated sheet, where the coated surface faced towards the substrate, and forms a composite web. The transfer sheet on the endless belt is separated from the web, leaving the coating on the substrate and the transfer sheet revolving around the endless belt (column 3, lines 41-46; Figure 2).

Tsukamoto et al. does not teach separating rolls to induce separation between a composite laminate of a transfer sheet and a substrate, with a coating therebetween. Birckhead, Jr. et al. teaches using a take-off roller (36) against an roller in an endless belt (16) for separating a fused sheet (34) from a release layer (20) (column 7, lines 16-20; Figure 1).


It would have been obvious for Tsukamoto et al. to use rollers to induce separation between a composite laminate of a transfer sheet and a substrate and would have been motivated to do so for more even separation between the transfer sheet and a substrate with less coating residue left on the transfer sheet thereafter.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonya Mazumdar whose telephone number is (571) 272-6019. The examiner can normally be reached on 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SM


CHRIS FIORILLA
SUPERVISORY PATENT EXAMINER
Au 1734